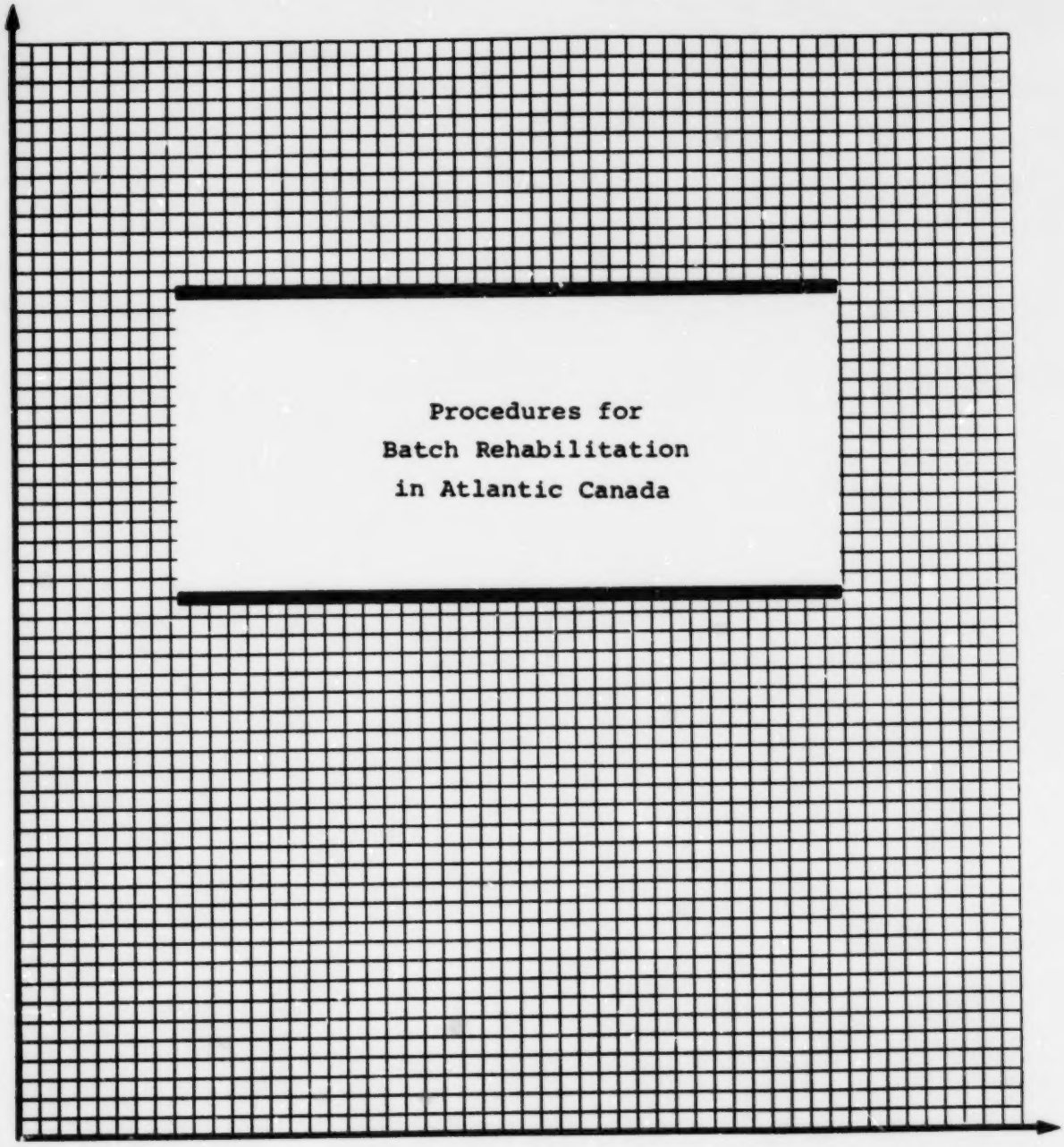



GARDNER PINFOLD CONSULTING ECONOMISTS LIMITED

COPYRIGHT - GPCE 1984

# Procedures for
# Batch Rehabilitation
# in Atlantic Canada

Prepared for

Canada Mortgage and Housing Corporation

Prepared by

Gardner Pinfold Consulting Economists Limited

October, 1984

## Abstract

Batch Rehabilitation refers to the rehabilitation of a number of owner-occupied homes by a single contractor. The Batch Rehabilitation Project was commissioned by CMHC as a two-phase study to investigate an alternative delivery mechanism for Homeowner RRAP in urban areas of Atlantic Canada.

Phase One found that batch-type schemes in the United States and England are not directly transferable to Atlantic Canada. A further assessment of the batch concept involving interviews with contractors and RRAP delivery agents concluded that the potential cost savings were limited and appeared to depend on a systems approach concentrating on common repairs. The batch concept might be a useful technique for directing activity in the housing market but its market potential and legal implications required further study. To reduce administrative complexity, the batch concept was further modified in Phase Two to follow standard RRAP procedures except for the use of a single contractor for a batch rehabilitation project. The use of a set of homeowner-contractor contracts was recommended to resolve the legal issue. The study concluded that the main benefits of Batch Rehabilitation may be its potential to increase housing market activity in specific areas. However, its attractiveness to homeowners, contractors and delivery agents remains uncertain. A demonstration project may provide a more definitive conclusion regarding the feasibility of the concept both in Atlantic Canada and in other housing market areas of the country.

# Executive Summary

## Overview

The Batch Rehabilitation Research Project was commissioned by CMHC as a means of investigating an alternative delivery mechanism for CMHC's urban Residential Rehabilitation Assistance Program (RRAP). As originally conceived, Batch Rehabilitation meant the simultaneous rehabilitation of a number of owner-occupied homes in urban centres of Atlantic Canada. Unlike conventional RRAP, each Batch Rehabilitation project would use a single contractor for rehabilitating all houses in the project.

## Objectives

The Batch Rehabilitation study was divided into two phases. The objectives of Phase One were to determine:

a) the potential economies and benefits of Batch Rehabilitation; and,

b) the feasibility of undertaking the Batch Rehabilitation of individually-owned units under the National Housing Act RRAP program and the degree that such activity can contribute to an increase in industry participation in residential rehabilitation and employment in an area.

The objectives for Phase Two were:

a) to determine, whether existing delivery procedures for NHA Homeowner RRAP should be modified to accommodate Batch Rehabilitation; and,

b) based on the outcome of (a), to develop a set of procedures for delivering Batch Rehabilitation. The procedures will generally conform to existing RRAP delivery procedures, with new procedures incorporated as necessary.

Phase One

The initial stages of Phase One of the Batch Rehabilitation Project analysed other forms of Batch Rehabilitation used in the United States and England. Only two Batch Rehabilitation schemes, one located in Barberton, Ohio, the other in Birmingham, England, were judged potentially useful for the purposes of this study.

The economic circumstances, the administrative settings, and the housing markets in which the foreign Batch Rehabilitation schemes operate differ significantly from the situation in Atlantic Canada. Consequently, the Phase One study concludes that the direct transfer of the foreign schemes to Atlantic Canada is not feasible.

The Phase One Study then assessed the feasibility of creating a Batch Rehabilitation scheme in Atlantic Canada. For this assessment, both RRAP delivery agents and contractors were interviewed. The delivery agents were skeptical of the merits of Batch Rehabilitation for homeowners, delivery agents and the construction industry.

According to the contractor interviews, Batch Rehabilitation would attract the interest of many small to medium sized, well-established general and specialized contractors. Cost savings on the order of 10 to 15 percent on materials are possible. The most suitable project size for most contractors appears to be from 10 to 20 units. The evidence on labour savings and potential administrative savings was inclusive.

According to foreign officials, the potential for Batch Rehabilitation is diminished in an area which has already received rehabilitation funding. The Phase One study recommends that Batch Rehabilitation in Atlantic Canada should be limited to urban areas were RRAP activity has not been extensive.

The study found that overall cost savings from Batch Rehabilitation are likely to be very limited. However, Batch Rehabilitation could serve as a useful tool for CMHC to direct activity in the housing market.

Results concerning the administrative structure and legal implications of Batch Rehabilitation were inconclusive. The second Phase of the Batch Rehabilitation Project was recommended on the basis that the design of an actual delivery mechanism would resolve these issues.

## Phase Two

### The Conceptual Framework

During the Phase One study, the Batch Rehabilitation concept evolved first from "total rehabilitation" applied to a number of housing units requiring a wide range of similar repairs, to a "systems approach" which involved only certain common RRAP-eligible repairs on a group of dwelling units. Finally, in Phase Two, to reduce administrative complexity, Batch Rehabilitation adopted the full range of conventional RRAP eligibility criteria to select a group of houses for which the repairs would be carried out by a single contractor rather than multiple contractors as under standard RRAP.

## Benefits of Batch Rehabilitation

The design of the delivery procedures required a practical re-assessment of the benefits for Batch Rehabilitation for each of the concerned parties in a project: contractors, delivery agents, homeowners and CMHC. The primary benefit of Batch Rehabilitation for delivery aspects appears to be increased program delivery. The benefit may be overshadowed by the need for extra administrative efforts to deliver the project.

For contractors, Batch Rehabilitation offers the possibility of an increased volume of work. The project may also induce larger contracting firms to participate in rehabilitation work for the first time. On the other hand, large companies may displace small firms which now complete the majority of RRAP work in Atlantic Canada.

Homeowners may gain some quality advantages if larger contractors participate in a Batch Rehabilitation project. Batch Rehabilitation offers no financial incentive for homeowners, who may also find Batch Rehabilitation a time-consuming process.

Batch Rehabilitation may be an alternative way of organizing the delivery of RRAP. Other possible benefits include the neighbourhood impact and market adjustment aspect of Batch Rehabilitation.

The study concludes that while the benefits envisioned during the early stages of this research project are conceptually possible, they are not strong enough, in themselves, to attract delivery agents and homeowners to a Batch Rehabilitation project.

## Conclusion

The study concludes that Batch Rehabilitation is difficult to justify as an efficient and effective procedure for delivering RRAP in urban areas of Atlantic Canada. The Batch Rehabilitation concept may be appropriate for other areas of the country where market circumstances differ from those of the Atlantic Region. However, if CMHC wishes to encourage Batch Rehabilitation in certain market areas, the study recommends that activity occur in either a new RRAP designated area, or in existing RRAP areas where program activity has not been extensive. Batch Rehabilitation should only be introduced into areas with experienced delivery agents.

A demonstration project may determine whether Batch Rehabilitation is feasible in certain circumstances. Because of the diversity of the housing industry and the housing stock in urban areas of Atlantic Canada, more than a single demonstration project may be required.

## Table of Contents


| | Page |
|---|---|
| 1. Introduction | 1 |
| 2. The Evolution of the Batch Rehabilitation Concept | 3 |
| 2.1 The Conceptual Framework | 3 |
| 2.2 Resolution of Issues | 5 |
| 2.2.1 Administrative Structure | 6 |
| 2.2.2 Legal Implications | 9 |
| 2.2.3 Potential Market Size | 10 |
| 2.2.4 Cost Savings | 10 |
| 3. The Procedures for Batch Rehabilitation | 12 |
| 3.1 The Implementation of Batch Rehabilitation | 12 |
| 3.2 Other Considerations | 21 |
| 4. An Elaboration on the Feasibility of Batch Rehabilitation | 24 |
| 4.1 The Benefits of Batch Rehabilitation | 24 |
| 4.2 The Views of Others: Delivery Agents and Contractors | 26 |
| 4.2.1 Delivery Agents | 26 |
| 4.2.2 The View of Contractors | 31 |
| 5. Conclusions | 34 |
| Appendix A: Procedures for Batch Rehabilitation | A-1 |
| Appendix B: Standard Bid Form | B-1 |
| Appendix C: Summary of Findings - Housing Stock in Need of Major Repairs - CMHC National Office Report | C-1 |

## 1. Introduction

This report presents the results of the second phase of the Batch Rehabilitation Research Project, commissioned by CMHC. It concentrates on the procedures necessary to implement Batch Rehabilitation within the context of CMHC's urban Residential Rehabilitation Assistance Program (RRAP). The Batch Rehabilitation concept involves the rehabilitation of a number of owner-occupied homes in urban centres of Atlantic Canada. Unlike typical RRAP, each Batch Rehabilitation project relies on a single contractor who has overall responsibility for the rehabilitation of all houses in a project.

The Phase One Batch Rehabilitation Project examined the potential economies, benefits and feasibility of Batch Rehabilitation. The objective of Phase Two is to produce a set of procedures for delivering Batch Rehabilitation. This involves examining the areas where the Batch Rehabilitation technique necessitates changes to the current delivery mechanisms for RRAP and either modifying these existing procedures or preparing new procedures where necessary. Since our goal in meeting the objective has been to simplify the introduction, administration and operation of Batch Rehabilitation as much as possible, we have tried to follow the former course wherever possible.

To meet the objective, we developed a three-pronged approach. First of all, the project team reviewed our Phase One report titled The Potential for Batch Rehabilitation in Atlantic Canada to determine which of the unresolved issues noted there could be resolved in Phase Two. Next, we examined the most current version of the Urban RRAP Delivery Handbook to determine the nature and scope of potential

modifications. Finally, representatives of groups with a special interest in RRAP were consulted on the feasibility and practicality of the proposed procedures. Those interviewed included both contractors and RRAP delivery agents.

This report begins with a brief review of the evolution of the Atlantic Batch Rehabilitation project, with particular emphasis on the modifications to the original program concept which have occurred as the research has progressed. Next, the unresolved issues raised in the Phase One study are examined. It is noted that the detailed work required to design the procedures for a Batch Rehabilitation scheme provided solutions to several of these unresolved issues. Chapter 3 presents an update on the feasibility of Batch Rehabilitation by focussing on the central issues related to the introduction of Batch Rehabilitation. Finally, step by step procedures for implementing a Batch Rehabilitation scheme are presented. Appendix A reviews the urban RRAP Delivery Handbook and provides detailed information on the changes required as a consequence of introducing Batch Rehabilitation. Appendix C provides a summary of the findings of CMHC's report Housing Stock in Need of Major Repair: Identification of Urban and Intra-Urban Concentration in Atlantic Canada.

## 2. The Evolution of the Batch Rehabilitation Concept

### 2.1 The Conceptual Framework

The central design of Batch Rehabilitation evolved several times as research progressed during Phases One and Two of the Project. Each design change refined the concept in order to reflect the type of Batch Rehabilitation implementation appropriate for the urban housing markets of Atlantic Canada.

Initially, the main element in the conceptual design of Batch Rehabilitation focused on the rehabilitation of a number of housing units requiring similar repairs. It was believed that housing units in a Batch Rehabilitation project would be totally rehabilitated, thereby realizing significant cost savings for contractors and homeowners. Implicit in this assumption is the requirement that in order for this design to be feasible, common repairs must be located in similar, if not identical, housing units. Such rehabilitation work was termed "total" Batch Rehabilitation.

The total rehabilitation concept works well in areas where a large number of units require rehabilitation and where levels of available funding match the cost of the work to be done. The Birmingham, England envelope scheme discussed in the Phase One Report is one example of such an approach. As the research progressed, however, it became apparent to us that the "total" rehabilitation concept was inappropriate for the diverse housing stock in the Atlantic Region.

As a consequence, the Batch Rehabilitation design was modified and a "systems" approach devised. The systems

approach appeared to provide a means to deliver Batch Rehabilitation to homeowners living in the heterogenous housing stock found throughout the neighbourhoods in RRAP-designated areas of Atlantic Canada. This concept is predicated on the assumption that a Batch Rehabilitation project would encompass only certain common components in a number of housing units. These components must be eligible for RRAP assistance. For example, the repair of roofs on twenty housing units within a RRAP designated area might comprise a Batch Rehabilitation project; furnace repairs in another set of units might comprise another project.

Phase One concentrated on the concept of Batch Rehabilitation. Phase Two moves beyond the conceptual stage towards the design of a workable mechanism for delivering Batch Rehabilitation. In moving from the concept to the application stage during Phase Two, further revisions to the underlying framework for Batch Rehabilitation became necessary. In our opinion, the systems approach is administratively complex. In addition, it appears to conflict with the current delivery mechanism for RRAP. To elaborate, most units requesting RRAP assistance require repairs in several RRAP eligible categories. Even after the application of a systems-based Batch Rehabilitation project, repairs in other components of the housing units participating in the project would likely be necessary. Standard RRAP would then have to be integrated with Batch RRAP to bring the units involved up to the minimum property standards required by the municipality. After careful deliberation, the project team concluded that the systems approach was not a feasible way to carry out rehabilitation activity in Atlanic Canada.

Our re-assessment of both the "total" and the "systems" approach to Batch Rehabilitation resulted in a

hybrid concept, where common elements of repair are no longer a necessity. Batch Rehabilitation, from the administrative point of view, may be viewed as a means to assemble a number of individual RRAP applications under a single contract. Common repair elements could exist (and would enhance the project) but would not be essential to the batch undertaking. Batch Rehabilitation would proceed in RRAP-like fashion in RRAP-designated areas. With the exception of the procedures necessary to initiate such a project, Batch Rehabilitation is functionally identical to RRAP.

## 2.2 Resolution of Issues

The Phase One report on Batch Rehabilitation, titled The Potential for Batch Rehabilitation in Atlantic Canada, examined the feasibility of introducing Batch Rehabilitation as a feature of the Residential Rehabilitation Assistance Program (RRAP) in urban areas of Atlantic Canada. The analysis determined that the form of Batch Rehabilitation that would be needed in the Atlantic Region, given the characteristics of the Region's existing housing markets, was a unique program delivery concept. This uniqueness raised a number of questions concerning the feasibility of Batch Rehabilitation, some of which remained unanswered. The outstanding questions centered on Batch Rehabilitation's:

- administrative structure;
- legal implications;
- potential market size; and,
- potential cost savings.

The research carried out in Phase Two resolves the first two issues. Section 2.2.3 references the results of recent research on the third aspect. The final issue will remain largely unresolved until a demonstration project takes place. The issues are discussed in the following sections.

During the design of the procedures for Batch Rehabilitation, we re-contacted both the contractors and delivery agents with whom we had discussed Batch Rehabilitation during Phase One. Their comments, which are elaborated on in detail in Chapter 3, were invaluable during this current Phase.

### 2.2.1 Administrative Structure

The Phase One report indicated that Batch Rehabilitation could be administratively complex and difficult to deliver. To deal with this, the project team set out to design a set of procedures that are simple and practical, and that implicitly encourage interested groups to participate in Batch Rehabilitation schemes. Another consideration was to produce a set of procedures that follow the design of RRAP as closely as possible. Since Batch Rehabilitation is basically an alternative way of delivering RRAP, the task becomes one of examining the relevant aspects of RRAP to determine where adjustments or modifications are required.

For Batch Rehabilitation to be successful, its administrative structure must be such that delivery agents, contractors and homeowners all see merit in participating in a Batch Rehabilitation scheme. Our project team spent a great deal of time examining each element of a Batch Rehabilitation scheme to determine where trade-offs might be necessary in order to maximize the likelihood that each would find merit in the scheme. To ensure the feasibility of Batch Rehabilitation, we were forced to make significant modifications to the program design of Batch Rehabilitation envisioned in Phase One. The most important of these modifications was the rejection of the "systems approach" to

Batch Rehabilitation, discussed earlier in section 2.1. Under the new approach, housing units with RRAP-eligible repairs could be assembled by the delivery agent into a Batch Rehabilitation project; the existence of similar repairs in units would be desirable but not crucial to the inclusion of a unit in the Batch project.

The Batch Rehabilitation delivery mechanism represents a conceptually simple modification to the standard RRAP procedures. At the same time being different, the procedures have the potential to be administratively more demanding than RRAP, particularly during the start of a project. Once the delivery agent has chosen a RRAP designated area in which to deliver Batch Rehabilitation, the delivery agent must:

- choose a Batch Rehabilitation neighbourhood within the designated area;
- inform residents through promotional and educational materials of the nature of Batch Rehabilitation;
- inform the industry about the new opportunity available to it through Batch Rehabilitation;
- undertake a detailed unit-by-unit inspection of the neighbourhood;
- coordinate the preparation of an information package for contractors;
- select a contractor; and,
- provide ongoing assistance and advice to the homeowners and the contractor, if required.

Once these steps are complete, Batch Rehabilitation essentially becomes a number of individual RRAP projects. The delivery agent then follows the administrative steps required for 'standard' RRAP, including project inspections, progress advancing, and monitoring.

The multiple homeowner structure of Batch Rehabilitation requires that both the delivery agent and the contractor play close attention to detail. This is necessary for two reasons. First of all, the delivery agent must carefully note the details on rehabilitation repairs during the inspection process. These details will form the basis of the information package supplied to contractors bidding on the Batch Rehabilitation project.

Secondly, it should be recalled that contractors are required to provide estimates of the repair costs on each individual property, as well as the entire Batch Rehabilitation project. The greater number of units involved in a Batch Rehabilitation project could increase the likelihood of miscalculations in cost estimates unless these estimates are carefully prepared and monitored as the project progresses.

Delivery agents in the larger urban centres of Atlantic Canada should already have the staff resources necessary to deal with this increased level of effort, although administrative costs may increase. The magnitude of the cost increases to the delivery agent will not be known until a demonstration project. Smaller centres may have some difficulty dealing with the issue of staff resources. If Batch Rehabilitation were to proceed in such areas without additional resources, the time involved to complete a project might increase. In such instancs, the provision of Batch project accountable delivery fee advances might be helpful in allowing an agent to bring resources, e.g., inspection services, to bear early in the project, and reduce small agency cash flow problems. CMHC currently makes accountable delivery fee advances to new delivery agents.

### 2.2.2 Legal Implications

The legal issues noted in Phase One stem from the uniqueness of the Batch Rehabilitation concept envisioned for Atlantic Canada and from the fact that when the Phase One report was prepared, procedures for an Atlantic Canada Batch Rehabilitation scheme did not exist. The necessary procedures have now been designed and appear in Appendix A of this report. The procedures describe the contractual arrangements and the legal responsibilities of each of the parties in a Batch Rehabilitation scheme.

The legal mechanism associated with the Batch Rehabilitation procedures mirror RRAP closely, particularly in the case of the legal relationship between the homeowner and the contractor. We recommend that all parties in a Batch Rehabilitation scheme agree at the outset of a Batch Rehabilitation project that contracts for rehabilitation work are between the homeowner and contractor. This is the current RRAP procedure.

Homeowners who now participate in RRAP are advised to sign contracts with the contractor undertaking the repairs. The contract specifies the nature of the work, the cost involved and other responsibilities of the contractor. Only the homeowner and contractor are party to the contract; neither CMHC or the delivery agent are involved. In a Batch Rehabilitation project, the model RRAP contract detailed in the Urban RRAP Delivery Handbook is sufficient for participating homeowners. In the case of the contractor, the Bid Form designed as part of the Batch Rehabilitation procedures includes a clause whereby the contractor agrees that neither the delivery agent or CMHC are parties to the contract, and as such, assume no liability for the Batch

Rehabilitation project. The Bid Form is included in this report as Appendix B.

### 2.2.3 Potential Market Size

Research on the issue of the potential market for Batch Rehabilitation in Atlantic Canada has recently been completed by the National Office of CMHC.* This work resulted from the recommendation in Phase One that 1981 Census data should be examined to provide some indication of the potential concentration of rehabilitation work in urban centres of Atlantic Canada. The research found a number of areas where rehabilitation need appears to be concentrated within urban centres. Appendix C includes a summary of the rsearch for Atlantic Canada. Complete copies of the report are available from the National Office of CMHC.

### 2.2.4 Cost Savings

The potential for cost savings was one of the original and central motivations for pursuing the concept of Batch Rehabilitation. During Phase One, several modifications to the original concept of Batch Rehabilitation were required and the prospect of major cost savings subsequently diminished. Even so, the Phase One report concluded that there might be some potential cost savings through the bulk purchase of materials, perhaps in the order of 10 to 15 percent. This level of benefit could be important in the RRAP context where client income is low, as

---

* CMHC, Housing Stock in Need of Major Repair: Identification of Urban and Intra-Urban Concentration in Atlantic Canada. Prepared by John Engeland, Research Division, CMHC National Office, May, 1984.

the objective of having minimum standards met would be more likely to be achieved.

The Batch Rehabilitation delivery procedures do not address the issue of cost savings explicitly; the resolution of this issue must wait for the actual experience gained through a demonstration project.

The potential decrease results from the shift in the conceptual design of Batch Rehabilitation from the "systems" approach to one where common repairs amongst all units in a project are not necessary. Under the systems concept, participation in a project was limited to eligible RRAP units that shared the same type of defect such as roofs or furnaces. Potential cost savings would accrue as a consequence of the bulk purchase of the materials necessary to undertake these common repairs.

While common deficiencies amongst units may being dealt with under the hybrid concept may exist, it is more likely that the types of repair items in such a Batch Rehabilitation project will be very diverse. As a consequence, opportunities for cost savings through bulk purchases of materials may be somewhat less than originally expected. As noted, however, only a demonstration project will resolve this issue.

# 3. The Procedures for Batch Rehabilitation

## 3.1 The Implementation of Batch Rehabilitation

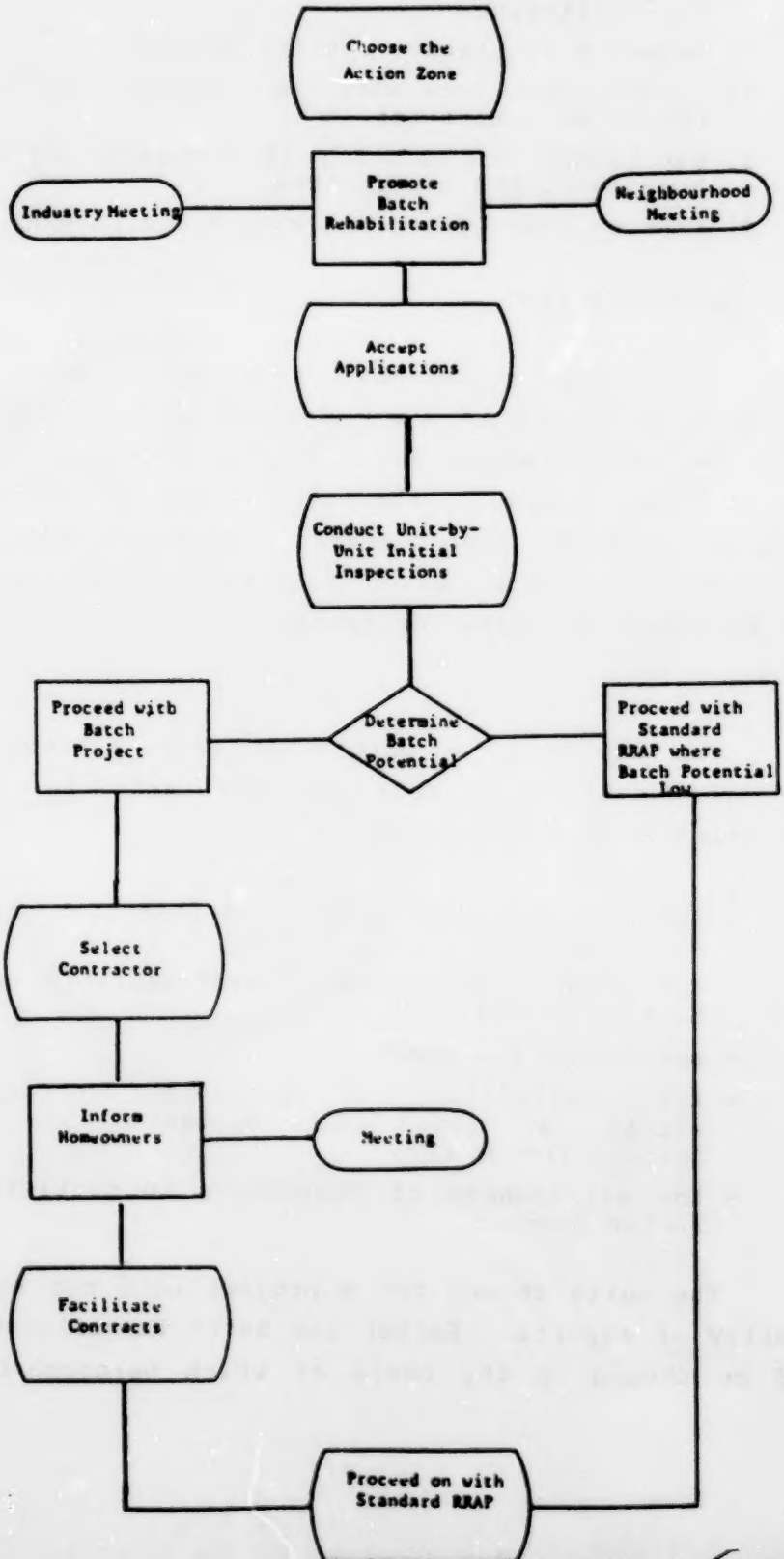
This chapter provides the detailed step by step procedures necessary to implement and administer Batch Rehabilitation as part of Urban RRAP for homeowners living in RRAP-designated areas of Atlantic Canada. Batch Rehabilitation conforms to standard RRAP eligibility criteria, funding levels, payment advancing procedures as well as to a number of other characteristics. Most of the key differences between standard RRAP and Batch Rehabilitation occur during the initial stages of a Batch Rehabilitation project. Exhibit 1 outlines the procedures which are described in the following sections.

Batch Rehabilitation is delivered in RRAP designated areas. The procedures for Batch Rehabilitation described below assume that the delivery agent has already recommended a highest priority area to CMHC and has had this area approved by CMHC for designation. A general survey of rehabilitation need is a component of the designation procedure. Once the area has been designated, Batch Rehabilitation may proceed according to the following plan:

1. Select a neighbourhood within a particular RRAP-designated area.
2. Promote neighbourhood participation in Batch Rehabilitation.
3. Promote industry participation in Batch Rehabilitation.
4. Solicit and select applications for a Batch Rehabilitation project.
5. Undertake detailed inspections of the applicants' units.

## Exhibit 1

## Procedures for Batch Rehabilitation



6. Determine the potential for Batch Rehabilitation.
7. Select a contractor for the project.
8. Inform the homeowner participants on the choice of contractor.
8. Facilitate the signing of contracts between homeowners and contractors.
9. Continue the project as with standard RRAP.

1. Area Selection

Phase One recommended that Batch Rehabilitation projects be initiated in newly designated RRAP areas rather than in designated areas where RRAP has been active for a period of time. Demand in the latter areas is anticipated to be weaker than in newer areas. Planning for a Batch Rehabilitation project could proceed simultaneously with plans to have an area designated as eligible for RRAP funding.

The choice of a particular area or neighbourhood within the designated area as the site for a Batch Rehabilitation project depends on:

- the overall need for rehabilitation in a neighbourhood;
- the general proximity of RRAP-eligible units to each other;
- the demand for RRAP;
- the availability of suitable contractors within a reasonable distance of the neighbourhood; and,
- the willingness of homeowners to participate in the project.

The units chosen for a project need not all have a similarity of repairs. Rather the Batch Rehabilitation area should be chosen on the basis of which neighbourhood best

satisfies the criteria listed above. It should be pointed out that any number of Batch Rehabilitation projects could occur in a designated area over time, depending on demand and the other factors noted.

2. Promote Neighbourhood Participation.

Each Batch Rehabilitation project relies on homeowner participation for success. As a consequence, the delivery agent is advised to spend a great deal of effort on promotional and educational activities oriented towards homeowners in the neighbourhood chosen for the Batch Rehabilitation project. Activities include:

- an initial neighbourhood meeting to inform potential Batch Rehabilitation participants on the nature of the concept; its potential benefits; their own role and responsibilities; the application procedures; contractual arrangements; and other project procedures;
- promotion of the Batch Rehabilitation project, following the same steps used in RRAP promotion, including media presentations, mailing out literature and door-to-door visits to potential applicants in an area;
- several progress meetings with participants during the various stages of selecting a project contractor;
- a meeting to inform the participants when rehabilitation activity is about to commence; and,
- periodic progress reports to participants concerning project activity.

3. Promote Industry Participation

One of the priorities of Batch Rehabilitation is to interest contractors who engage primarily in new construction work in the merits of rehabilitation work. The agent should make a concentrated effort to inform area

builders about Batch Rehabilitation. A builders' meeting would be a good way to begin to address this objective. In larger urban centres, the involvement of Contractor Associations; if they exist, is encouraged as well. It is clear that the Batch initiative will not succeed unless contractors with the necessary technical and management skills are attracted to bid on the project.

4. Solicit and Select Applications

Once the delivery agent has informed homeowners living in the potential Batch Rehabilitation neighbourhood about the project, the acceptance and processing of applications may commence. There are no special eligibility criteria for participating in a Batch Rehabilitation project, other than the applicants live within the neighbourhood chosen by the delivery agent, own their own home and satisfy the requirements of standard RRAP. Homeowners who satisfy these criteria are acceptable for a Batch Rehabilitation project.

5. Undertake Detailed Inspections

Before proceeding with a Batch Rehabilitation Project, the delivery agent must determine if the units for which applications have been received are eligible for standard RRAP. Step 4 in the Batch Rehabilitation procedures requires the delivery agent to complete detailed RRAP inspections of these units.

These detailed inspections form an important step in the mechanism for delivering Batch Rehabilitation. The information gathered during the inspections is reported on the CMHC 2553 form. This information is used as the basis for determining both the individual and total costs of the

project. Both the cost estimates and the estimates of repairs must be used by the delivery agent to judge the estimates provided by the contractors bidding on the project.

6. Determine the Potential of Batch Rehabilitation

Once each of these initial steps is complete, the delivery agent must decide on whether or not a Batch Rehabilitation project in a neighbourhood is warranted. This decision is primarily based on the response by homeowners to the project, measured in the volume of applications received. Another factor that should receive careful attention is the degree of proximity of the potential Batch Rehabilitation units. The latter point is important if neighbourhood quality improvements are to be successful.

If the delivery agent decides in the affirmative, the contractor selection procedure begins. If not, it is a simple matter to proceed with the standard RRAP delivery vehicle. The final decision to proceed with a Batch Rehabilitation project need not proceed until after bids are received from potential contractors. At this stage, the delivery agent is at a better position to evaluate the potential benefits and costs of the project as compared to standard RRAP.

7. Select a Contractor

The contractor selection procedures are a key element in the Batch Rehabilitation process. The use of a single contractor to carry out the rehabilitation on a number of housing units is the one area of measurable difference between Batch Rehabilitation and standard RRAP. The contractor selection procedures are straightforward. They are administered by the delivery agent in their entirety, but

homeowners are given the opportunity to voice their opinions on contractor selection. Detailed procedures for the selection of the contractor are provided in Part V of Appendix A.

Once the delivery agent has prepared a list of a number of homeowners interested in a Batch Rehabilitation project, an information package for contractors is prepared. The package forms the basis of a newspaper advertisement which solicits an expression of interest on the part of contractors. The information package must provide sufficient details to allow contractors to decide whether or not they are interested in bidding on the project.

The delivery agent establishes a preliminary list of up to six contractors from the respondents to the advertisement. In moving from this preliminary list to a short list, the delivery agent should assess the capabilities and experience of the firms, their own experience with the firms and other factors noted in Appendix A. In addition, the delivery agent must seek input from participating homeowners on the selection of contractors. Each homeowner is presented with the preliminary list of contractors and given the opportunity to either add or delete particular contractors from the list. Since the goal of the delivery agent at this stage is to produce a "short list", it may be necessary to negotiate with homeowners concerning their preferences for contractors. Once the views of the homeowners have been carefully considered, the delivery agent must develop a short list of three contractors who are requested to prepare detailed estimates of the required rehabiltatin work.

The choice of "three" contractors conforms to the general selection criteria for government contract work. The choice of only three contractors should also help to minimize

potential disruptions for homeowners, since during the bid preparation stage, both contractors and/or their sub-contractors may visit each home in the project.

Each contractor submits a bid on a standard Bid Form, presented in Exhibit 2. The delivery agent evaluates the bids and chooses a contractor to carry out all the work.

8. Inform the Homeowner Participants

Once the contractor is selected by the delivery agent, a meeting of all participants in the Batch Rehabilitation project should take place. The meeting may be viewed as a forum whereby homeowners are able to question both the delivery agent and the contractor on the project. The delivery agent should introduce the contractor to the homeowners and reiterate the steps that will be followed as the project proceeds. The contractor should explain how the work will proceed with particular emphasis on the scheduling of the work.

9. Facilitate the Signing of Contracts

It is important that contracts be utilized in a Batch Rehabilitation project. The involvement of a number of homeowners, the likely variety of repairs, the multiple commitments by the contractor and the work scheduling requirements of work necessitate the use of contracts between individual homeowners and the contractors.

10. Continue as with Standard RRAP

Once the contracts between the individual homeowners and the contractor are signed, work proceeds as for standard RRAP. From the point of view of the delivery agent, the

Exhibit 2

Bid Form

Having examined all documents relating to work required at:

CIVIC _____
CIVIC _____
CIVIC _____
etc.

We offer to furnish all materials, plant and labour necessary for the proper execution and completion of the work including all government sales, hospital and other taxes, obtain and pay for all municipal permits for the lump sum of: $ ;
_____ Dollars.

The lump sum consists of;

CIVIC _____ $_____
CIVIC _____ $_____
etc.

It shall be understood that we have determined the quantity and quality of the materials required; investigated each location and are fully aware of the work required.

If we are accepted to perform this work, we shall complete the entire project within _____ weeks from date of award.

We are also aware that any contractual obligations are between the contractor and each homeowner.

Signature _____
Company _____
Address _____
_____
Date _____

Batch Rehabilitation project becomes a series of individual RRAP projects. RRAP procedures for loan advancing, inspections and other activities are followed. The delivery agent should expect to spend some time acting as a liaison between the contractor and homeowners participating in the project.

## 3.2 Other Considerations

### Lien Holdbacks

At present, lien holdbacks normally receive little attention during the delivery of regular RRAP. Both the contract amounts and the firms doing the work are usually small and homeowners are generally not aware of the requirements of the Lien Act. The Lien Act is such, however, that any labourer, sub-contractor, or supplier could place a lien against a property. Batch Rehabilitation involves work on a number of properties and should liens be placed, all participating properties would be affected. For this reason, homeowners must be made aware of the consequences of a lien and be strongly encouraged to follow the holdback provisions.

If each homeowner retains 10 percent from each payment as required by the Act, then the delivery agent must certify when each unit is substantially complete. This date is used to commence the holdback period of 45 days during which time any person or firm with a claim can register a lien against the property. At the end of 45 days, the contractor must provide a Statutory Declaration, stating there are no liens registered against the building. Once this procedure has been completed, the contractor is entitled to the holdback.

The Lien Act involves extra work on the part of both the homeowner and the contractor. The extra work may discourage some contractors from bidding. It may be tempting to dispense with the holdback but the right of trades and suppliers to lien a property whether the holdback is retained or not is an important consideration.

## Legal Responsibilities

The contractural arrangements in a Batch Rehabilitation project are between the participating homeowners and the contractors. Neither the delivery agent or CMHC are legally parties to the arrangement between the homeowners and contractors. The homeowner/contractor agreement makes no mention of either of the sponsoring agencies. The Bid Form signed by the contractors contains a clause whereby the contractor agrees that the contract is between the homeowner and the contractor; the sponsoring government agencies are not party to the Agreement.

The delivery agent should investigate other legal factors at the time that Batch Rehabilitation is considered as a delivery vehicle for RRAP in a municipality. These factors centre on the legal complications that could arise as a consequence of the delivery agent choosing a contractor for a Batch Rehabilitation project.

Many municipalities prohibit their employees from participating in procedures that require the municipality to undertake what is, in effect, a public tender for private property. In some municipalities, there is a fear that if the Batch Rehabilitation bid procedure is managed by the municipality or its agents then the municipality will be held legally responsible if litigation occurs between the homeowners and contractors. In spite of these fears, it

should be pointed out that the Batch Rehabilitation contract is between the contractors and homeowner only; the contract contains a clause which protects the delivery agent from legal recourse by both the contractor and homeowner.

## 4. An Elaboration on the Feasibility of Batch Rehabilitation

Phase Two of the Batch Rehabilitation Research Project is designed to develop Batch Rehabilitation from the conceptual stage to a workable delivery mechanism. During this process, several of the issues raised at the conceptual stage were clarified or resolved. At the same time, other issues and concerns which we believe have an important bearing on the viability and feasibility of Batch Rehabilitation became apparent. The proposed Batch Rehabilitation procedures were reviewed by two experienced RRAP delivery agents and several general contractors in the Halifax-Dartmouth area. This review revealed several areas of difficulty with the Batch Rehabilitation process.

### 4.1 The Benefits of Batch Rehabilitation

The Phase One Batch Rehabilitation Report examined the question of benefits from the perspective of CMHC, the delivery agent, the residential construction industry and the homeowner. The primary benefits of Batch Rehabilitation were related to work quality aspects and to an industry adjustment effect. Cost savings, originally viewed as a major benefit of Batch Rehabilitation, were projected to be not as significant as had been originally expected.

Quality enhancement may be a bona fide benefit of Batch Rehabilitation, both from the perspective of the administrators and homeowner participants in a project and from a neighbourhood perspective. Batch Rehabilitation may provide the incentive necessary for larger construction firms to become involved in rehabilitation work. Consequently, as a second benefit, Batch Rehabilitation may help promote an industry adjustment towards the growing rehabilitation

market. At this time, however, both types of benefits can only be regarded as hypothetical. Thus, it is difficult to make definitive and conclusive statements on these aspects of the Batch Rehabilitation process. A Batch demonstration project would help in assessing the importance of these benefits.

Having larger firms which do not currently participate in standard RRAP involved in Batch Rehabilitation may enhance the quality of work provided to homeowners. In some areas of the Atlantic Region, the quality of work requires some improvement and Batch Rehabilitation, if applicable for these areas, may be the means to achieve this.

Batch Rehabilitation will work best in neighbourhoods within RRAP-designated areas. This approach was initially viewed as important from the cost savings perspective - by concentrating all the necessary resources in a small geographic area, the Batch Rehabilitation contractor would be able to generate cost savings. Now, the diminished expectations of cost savings make this aspect less significant than anticipated. However, the neighbourhood aspect still retains its importance from a quality and housing standards perspective.

Conceptually, Batch Rehabilitation would involve the simultaneous repair of a number of housing units in a neighbourhood. The activity thus generated may provide a more immediate stimulus than standard RRAP, thereby contributing to the revitalization of the neighbourhood. In addition, the municipality delivering Batch Rehabilitation may find it a useful tool for promoting and supporting maintenance and occupancy by-laws. When applied to a number of units at once, Batch Rehabilitation provides visible evidence of the municipality's commitment to maintaining a

minimum standard of housing and improving the housing stock in an area.

## 4.2 The Views of Others: Delivery Agents and Contractors

During Phase One of this Research Project, both delivery agents and contractors were interviewed to seek their views on the concept of Batch Rehabilitation. To ensure that the procedures developed in Phase Two are practical and realistic, representatives of both groups were contacted again. The delivery agents commented on both the procedures and the overall feasibility of Batch Rehabilitation. Contractors were questioned on the procedures and on their interest in participating in a Batch Rehabilitation project.

### 4.2.1 Delivery Agents

The RRAP delivery agents in Halifax and Dartmouth deal with the largest urban area in the Atlantic provinces. Combined, these two agents have worked with RRAP for nearly 18 years in total. Their knowledge of and experience with RRAP delivery, RRAP applicants and the rehabilitation industry in their areas is the kind of expertise required for this review.

On the positive side, the delivery agents agreed that the quality benefits and the possible neighbourhood impacts of Batch Rehabilitation are worthwhile. Batch Rehabilitation, in certain circumstances, may provide better quality rehabilitation work by inducing larger firms to participate in rehabilitation. Such quality improvement may be especially likely in areas like administration, where some small firms now have difficulty.

On the negative side, the delivery agents pointed out that these benefits have yet to be demonstrated. Viewed in the light of the actual RRAP industry in the areas where RRAP is delivered, a different perspective emerges. The delivery agents offered comments on the procedures in the following areas:

- the choice of a contractor;
- the RRAP clientele;
- the RRAP contractors; and,
- the neighbourhood effects.

Contractor Choice

Both delivery agents believed that it would be difficult for the delivery agent to choose a contractor. The primary reasons for this are related to the legal, administrative and client relations considerations that Batch Rehabilitation would involve.

In the case of the administrative and client relations factors, the agents indicated that choosing a contractor is not part of their 'traditional' role; the choice is the responsibility and right of the client. Even if the agent agreed to make the choice, the agents believed that many homeowners would be unwilling to accept this choice. If contractor/homeowner difficulties arose, the delivery agents' view was that the agent would be held responsible, at least from the client's perspective. At present, the homeowner must choose their own contractor; the delivery agent is not involved in the selection process.

The RRAP Clientele

The agents pointed out that RRAP is designed for a particular type of client with particular housing problems -

RRAP clients tend to be elderly and/or lower income persons. While some of these clients would welcome the opportunity to have the delivery agent choose a contractor, many would be confused by the process. The likelihood of several contractors and sub-contractors inspecting their homes, required as part of the contractor selection process, may disrupt these clients. The delivery agents felt that in spite of the opportunity for homeowners to veto proposed contractors during the selection process, many homeowners would view the contractor choice mechanism with skepticism. Furthermore, some homeowners may believe that the mechanism diminishes their freedom of choice.

Batch Rehabilitation projects are designed around the notion of a number of housing units comprising a project. Given the nature and size of the firms operating in Atlantic Canada, there is a strong possibility that Batch Rehabilitation projects would proceed on a house by house basis, not en masse. The time span for the total project could reasonably be expected to be measured in months.

Homeowners participating in Batch Rehabilitation projects would find themselves on a contractor's waiting list. The potential for uncertainty concerning the time when work will commence and be completed on their house is high. The delivery agents felt that it would be an on-going and difficult public relations task to keep homeowners satisfied that they were being treated equitably, in terms of work activity on their home. While this task, in their view, belongs to the contractor, the delivery agent felt that a great deal of public relations activity will likely default to the agents.

RRAP Contractors

A major benefit of Batch Rehabilitation relates to an industry re-adjustment effect, from new housing to rehabilitation work. It is also hypothesized that Batch Rehabilitation may induce larger construction firms to consider Batch Rehabilitation as a viable entry point to the rehabilitation industry. These larger firms may also provide work quality benefits to homeowner participants. The discussion of these benefits with the delivery agents revealed several conflicts between the conceptual and the actual situation, as perceived by the agents. The contractors' point of view follows in the next sub-section.

The delivery agents expressed the opinion that the quality aspect of RRAP work would be better enhanced by offering RRAP training courses to interested contractors in the Region. In this way, the industry would receive the skills upgrading necessary to ensure its continued viability while still retaining the character of the small firms which comprise such a large part of the industry. This recommendation (Rehabilitation Skills Courses) could fit the Batch Rehabilitation context in any event. At the same time, it must be noted that rehabilitation is not the exclusive preserve of the small contractor.

The impact of the Batch Rehabilitation-induced entry of larger residential construction firms into the RRAP-sponsored rehabilitation market might be negative, when considered in light of the current rehabilitation industry. According to the agents, the industry in the Halifax-Dartmouth area and in the Atlantic Region is largely comprised of small firms, many of whom depend on RRAP work for a significant portion of their income. In the agents'

view, many of these small firms lack the administrative, financial and labour-related expertise necessary to undertake Batch Rehabilitation work. Thus, unable to compete with larger firms, many of the smaller firms may be squeezed out of the market.

These small rehabilitation firms usually provide personal service to RRAP homeowner clients. In addition, small contractors generally do not hesitate to ask the delivery agent for technical assistance or clarification of problems encountered during a project. Delivery agents are better able to influence the quality of rehabilitation work as a consequence of their frequent contacts with the contractors. On the other hand, if larger firms were employed, the agents felt that this personal touch may be lost, as would some of the delivery agent/contractor interaction. In our view, this may not be entirely true since many "large" firms in Atlantic Canada typically employ less than twenty persons. In any event, it is not clear whether, in fact, these larger firms will produce work of a significantly better quality than that currently produced.

The Neighbourhood Effects

Batch Rehabilitation is based on the notion of rehabilitating a number of housing units within a neighbourhood. The volume of activity generated by a batch rehabilitation project may contribute to an overall upgrading of the neighbourhood. The strength of this "neighbourhood effect" depends on factors such as the size of the project, the type of rehabilitation work, the relative proximities of the housing units in the project and the size of the contracting firm doing the work. These factors also determine whether the neighbourhood effects of Batch Rehabilitation are immediately noticeable, or whether they

primarily occur over a longer term as the rehabilitation work is completed.

Clearly, the greater the number of housing units in a batch rehabilitation project, the greater the potential neighbourhood effect is likely to be. Since Batch Rehabilitation projects have the potential to encompass larger volumes of units during a given time than standard RRAP, the neighbourhood effects from Batch Rehabilitation are likely to be greater, and may be more apparent at an earlier stage, than those from an equivalent number of standard RRAP projects.

### 4.2.2 The View of Contractors

As part of the Phase Two research, we interviewed several contractors in the Halifax-Dartmouth area to determine their views and their interest in participating in this form of rehabilitation work. Three of the general contractors with whom we spoke during Phase One were re-contacted. These firms vary in size, depending on the season and the volume of work. They typically employ from 10-20 persons; if the volume of work warrants it, they usually hire more persons. In the context of the residential construction industry in Atlantic Canada, the firms are relatively large.

The contractors continue to express a general interest in the Batch Rehabilitation project. However, due to the lack of a specific Batch Rehabilitation project with a specified number of units and repairs, it was difficult to obtain more than an expression of general interest from the contractors. Several contractors indicated that, purely from the rehabilitation aspect of the work, it would take at least two or three demonstration projects to establish the

feasibility of Batch Rehabilitation. In light of the diverse housing markets and industry structure in the Atlantic Region, we conclude that demonstration projects might need to be undertaken in a number of locations in the Region.

The contractors had no difficulties with the contractor selection mechanism proposed in Chapter 3. They did voice some concern about the prospect of separate contracts between each homeowner and the contractor; a single contract between the delivery agent and the contractor would be preferable to them.

The proposed procedures no longer require participating units to share common types of repairs, as was the case in the systems approach. Consequently, a diversity of repairs is possible in a single Batch Rehabilitation project. The contractors indicated that only limited cost savings could be anticipated.

In order to examine the possible neighbourhood benefits of Batch Rehabilitation more closely, we questioned the contractors about the way they would undertake a Batch Rehabilitation project. The contractors indicated that work would proceed on an "activity" basis, from unit to unit. For example, if electrical repairs were required on several units, an electrical work crew would proceed from unit to unit undertaking the various stages of the job. Contractors undertaking Batch Rehabilitation work would likely continue working on other projects at the same time, and if so, it is likely the crews would also be moved from Batch Rehabilitation units to other contracts as required.

A consequence of this type of activity is that houses will probably be left in various stages of completion for varying periods of time. The rehabilitation process

could be quite lengthy and quite disruptive for the Batch Rehabilitation clients. This type of unit by unit activity may imply that the immediate neighbourhood impact effect visualized at the conceptual stage is difficult to achieve. The longer term benefits that occur from rehabilitation work in a neighbourhood would still occur, however.

Although only a small number of contractors were interviewed, we believe their views are indicative of the industry. Moreover, their reactions to several aspects of Batch Rehabilitation coincide with those of the delivery agents and with our own research and experience.

## 5. Conclusions

The objective of Phase Two of the Batch Rehabilitation Project is to design a set of procedures for Batch Rehabilitation. Meeting this objective involved a review of the unresolved issues of Phase One, a review of the urban RRAP procedures and discussions with persons familiar with the nature of RRAP and its delivery in Atlantic Canada.

Phase One examined the feasibility and potential for Batch Rehabilitation in Atlantic Canada. Phase Two moves beyond the conceptual stage into the design of procedures necessary to implement Batch Rehabilitation. In moving from the conceptual to the practical stage, several modifications to the original design were necessary. Some of these have significant implications for the appropriateness of Batch Rehabilitation for urban RRAP designated areas in Atlantic Canada.

A major concern arises from the modification of the "systems" approach to Batch Rehabilitation to one where only RRAP eligibility criteria apply. While this modification is necessary in order to make Batch Rehabilitation administratively practical, the result is that functionally it makes Batch Rehabilitation equivalent to RRAP. The major procedural difference between the two schemes is then primarily related to the use of contractors: Batch Rehabilitation relies on a single contractor for a number of units; standard RRAP relies on a number of contractors.

The administrative modifications necessary to introduce the contractor selection procedure are not complex, but they are time-intensive not only for the delivery agent, but for the contractor and the homeowner as well. The

benefits to the delivery agent of increased program delivery may require some extra efforts to administer Batch Rehabilitation. In addition, the delivery agents expressed a reluctance to assume the responsibility for selecting a contractor for a Batch Rehabilitation project. Possible negative impacts on small contracting firms and time-related implications for the homeowner are also of concern to the delivery agents.

For contractors, Batch Rehabilitation offers the possibility of an increased volume of work. Batch Rehabilitation may also offer contractors the opportunity to better phase and coordinate their work. Another benefit may be the guarantee of a specific volume of work. The project may induce larger contracting firms to participate in rehabilitation work for the first time. However, these companies may displace smaller firms which now complete the majority of RRAP work in Atlantic Canada, because many small firms do not have the expertise necessary to manage a Batch Rehabilitation project.

Homeowners may gain some quality advantage if larger contractors participate in Batch Rehabilitation schemes, but Batch Rehabilitation apparently offers no significant cost savings. On balance, homeowners may have difficulty differentiating the benefits of Batch Rehabilitation from those of standard RRAP.

To sum up, Batch Rehabilitation may be an alternative way of organizing the delivery of RRAP. The benefits of Batch Rehabilitation include the possibility of increased work quality as well as the improvement of neighbourhoods within RRAP designated areas. In addition, Batch Rehabilitation may help the residential construction

industry adjust to a market where rehabilitation plays a more important role.

While these benefits are conceptually possible, the Study Team doubts that, in themselves, the benefits are strong enough to attract delivery agents and homeowners to a Batch Rehabilitation project. Furthermore, the entry of larger firms into the rehabilitation market lead to the displacement of smaller firms now active in standard RRAP.

In spite of the difficulties enumerated in this report, CMHC may wish to encourage delivery agents to promote Batch Rehabilitation in certain areas of the Region. In such circumstances, we recommend that the Batch Rehabilitation project take place in a new RRAP designated area, or at least an area where RRAP applications have been minimal. Delivery agents who decide to administer the Batch Rehabilitation form of RRAP should have a great deal of experience with RRAP and should be very familiar with their local housing industry.

A demonstration project may determine whether Batch Rehabilitation is feasible in certain circumstances. However, given the type of concerns raised in this report, there is reason to doubt whether a single demonstration project would provide conclusive evidence to warrant offering of Batch Rehabilitation in the Region. A number of projects in different of urban areas may be required because of the diversity of both the areas and the housing industry in Atlantic Canada.

# APPENDIX A

# PROCEDURES FOR BATCH REHABILITATION

## Introduction

This Appendix reviews the sections of the Urban RRAP Handbook where changes should be considered if the Batch Rehabilitation project is introduced as part of RRAP. Each section of this appendix briefly discusses our recommendations for change or modification. Our goal in preparing this appendix is to keep potential changes to the Handbook to a minimum, while ensuring that all potential changes receive adequate attention. However, this Appendix is not meant to be used directly as a set of Handbook revisions.

## PART I - ORGANIZATION OF HANDBOOK

### 4. KEY ELEMENTS INDEX

The majority of the key elements of RRAP remain unchanged under a Batch Rehabilitation project. Changes that are required are discussed in the appropriate sections of the Handbook.

## PART II - INTRODUCTION: SUMMARY OF PROGRAM INTENT AND RELATIONSHIP TO OTHER PROGRAMS

A Batch Rehabilitation project introduced as part of RRAP would change neither the intent of RRAP nor its relationship to other Programs. Batch Rehabilitation may be a way of enhancing the quality of repairs provided under RRAP. Other benefits include a potential neighbourhood impact of Batch Rehabilitation.

## PART III - LEGISLATION AND OBJECTIVES

### 1. LEGISLATION

The existing Batch Rehabilitation may be incorporated under existing RRAP legislation detailed in Sections 34.1 to 34.14 of the National Housing Act.

### 2. OBJECTIVES

The objectives of RRAP are not changed in the introduction of Batch Rehabilitation.

## PART IV - PROGRAM DESIGN

### 1. GENERAL PROGRAM POLICIES

Batch Rehabilitation does not change the intent or the implementation of RRAP policies. Changes in this section are not required, although CMHC may wish to add the following paragraph to Section 1.1 Summary, which introduces and summarizes Batch Rehabilitation.

> Under certain conditions, such as in new RRAP designated areas, the delivery agent may wish to make use of the Batch Rehabilitation design to improve program takeup. Batch Rehabilitation, a special feature of RRAP, is designed to permit the rehabilitation of a number of owner-occupied housing units by a single contractor within a short period of time.

## 2. MUNICIPALITY AS AGENT FOR THE CORPORATION

The Agency Agreement between CMHC and the delivery agent should make reference to Batch Rehabilitation and the role of the delivery agent in administering Batch Rehabilitation.

A Batch Rehabilitation project increases the intensity and the volume of work that must be undertaken by the delivery agent. The delivery agent is required to coordinate the Batch Rehabilitation project. Procedures and activities include organizing individual projects, choosing a contractor, acting as initial go-between for the contractor and homeowner, as well as monitoring and approving the work of the contractor.

These administrative factors may offset the potential benefits of Batch Rehabilitation for some delivery agents. This may be particularly true in the case of smaller urban centres which have neither the financial or administrative resources necessary to carry out a Batch Rehabilitation project. In order that Batch Rehabilitation have some appeal in such cases, to the delivery agent, it is recommended that CMHC increase the level of funding to the delivery agent.

## 3. PLANNING AND BUDGETING

In order to be most effective, Batch Rehabilitation requires an identification of areas in which RRAP-type repairs may be prevalent. Consequently, this may require either up-dating or revising the Urban Priorities List to reflect potential areas within urban centres where Batch Rehabilitation may apply. The Capital Budget Control Program should be revised to include the provision that Batch Rehabilitation projects may be undertaken by delivery agents.

Budgets for Batch Rehabilitation should be prepared and included as part of the annual capital budgeting procedure; capital budget allocations for Batch Rehabilitation would be part of the annual allocations for RRAP. As noted earlier, capital budgets for municipalities delivering Batch Rehabilitation as a component of RRAP may require additional capital funding to compensate for increased administration time on the part of delivery agents.

## 4. AREAS DESIGNATED FOR RRAP

From a homeowner's perspective, the financial incentives accruing from participation in a Batch Rehabilitation project may be marginal. In order to encourage homeowners to participate in a Batch Rehabilitation project, the delivery agent may wish to offer Batch Rehabilitation exclusively to homeowners within certain neighbourhoods of newly designated RRAP areas. This arrangement should increase overall RRAP takeup within an area; the delivery agent may wish to continue to offer Batch Rehabilitation exclusively until it is determined that the greatest needs in an area are met, or until the interest of either homeowners or rehabilitation contractors diminishes below levels necessary to sustain the program. Normal RRAP for homeowners would then be offered in an area.

### 4.3 Selection Criteria for Rehabilitation Areas

The most important criteria for selecting an area for a Batch Rehabilitation project is there be several units located either on one street or in close proximity to each other that are in need of rehabilitation.

Batch Rehabilitation in Atlantic Canada was initially predicated on the "total" repair concept of housing units within a designated area. This was later revised as the "systems" approach whereby only properties sharing specific RRAP-eligible repairs would participate in a Batch Rehabilitation project. The subsequent review of the operational and administrative aspects of incorporating this design into Batch Rehabilitation has concluded that such a restriction is impractical within Atlantic Canada housing markets. Consequently, any homeowner with eligible RRAP repairs should be eligible for participation in a Batch Rehabilitation project, provided that a sufficient number of other homeowners in the immediate area participate as well.

The delivery agent is responsible for determining which neighbourhoods within the designated area will be eligible for Batch Rehabilitation. Delivery agents typically use windshield surveys to assess the relative need of units in need of rehabilitation and to determine the location of potential RRAP designated areas. This work may be considered part of the necessary preliminary planning stages for Batch Rehabilitation. These surveys may provide a general indication of the potential for Batch Rehabilitation within certain neighbourhoods of the designated area. If the delivery agent decides to undertake a Batch Rehabilitation project, a more extensive survey of the units applying for the project is required.

## 4.7 Training

In addition to the activities and procedures that the delivery agent must carry out as part of RRAP delivery, the Agent is responsible for an additional set of procedures and instructions under a Batch Rehabilitation project. These

responsibilities result from the coordination of Batch Rehabilitation and include activities such as choosing the Batch Rehabilitation area, encouraging homeowner participation, choosing a contractor, and monitoring the project. Consequently, the delivery agent may require initial training in order to deliver Batch Rehabilitation.

## 5. ELIGIBLE APPLICANTS

The eligibility criteria for applicants to a Batch Rehabilitation project will not differ from those currently in place for RRAP.

## 6. ELIGIBLE PROPERTIES

Only owner-occupied housing units will be eligible for Batch Rehabilitation. In all likelihood, the units will be single-detached units, but Batch Rehabilitation is not restricted to single-detached units. The properties must be in close proximity to one another. Rental dwellings are not eligible for the form of Batch Rehabilitation discussed here.

## 7. ELIGIBLE REPAIRS

The eligible repairs under a Batch Rehabilitation project remain the same as those for RRAP.

## 8. TENANT DISPLACEMENT ALLOWANCE

The tenant displacement allowance should follow the RRAP guidelines.

## 9. MAINTENANCE AND OCCUPANCY BY-LAWS

The provisions of RRAP which concern the adoption of maintenance and occupancy by-laws by the municipality also apply to the Batch Rehabilitation component. In conjunction with Batch Rehabilitation, these by-laws provide the municipality with the opportunity to enhance the quality of residential accommodation within an area.

## 10. REHABILITATION STANDARDS

RRAP Standards apply in a Batch Rehabilitation project.

## 13. REPORTING, MONITORING AND EVALUATION

Batch Rehabilitation projects will follow the reporting, monitoring and evaluation procedures of RRAP. Since one goal of Batch Rehabilitation is increased program takeup concentrated within a shorter time span, program monitoring activity should increase as a consequence of Batch Rehabilitation.

## 14. LOAN TERMS AND CONDITIONS

The loans, terms and grants available under Batch Rehabilitation remain unchanged from those of RRAP.

18. OWNER'S LABOUR

By definition, Batch Rehabilitation projects involve repairs made to a number of housing units by a single contractor. As such, homeowners who wish to contribute their own labour towards the cost of repairs would probably not wish to participate in a Batch Rehabilitation project. This is not to say, however, that some homeowners may wish to make arrangements with the contractor to undertake a portion of the work themselves.

23. START-UP FUNDS FOR NEW RRAP DELIVERY AGENTS

Given the likelihood that Batch Rehabilitation projects will result in increased up-front activity for new delivery agents, CMHC may wish to consider increasing the amount of start-up funds. Since an anticipated output of Batch Rehabilitation projects is increased rehabilitation activity, the funds should be able to be repaid within a relatively short period.

24. DIRECT DELIVERY OF RRAP BY CMHC

Smaller municipalities may have the volume of housing rehabilitation work necessary for Batch Rehabilitation projects. It is unlikely, however, that such small municipalities will have the staff necessary to act as the delivery agent for a Batch Rehabilitation project. The immediate accessibility of the delivery agent to both the contractor and the homeowners is an important feature of Batch Rehabilitation. CMHC may not have the resources necessary to meet this commitment in smaller communitities. While CMHC may deliver RRAP directly under special

circumstances, it is our recommendation that due to the small market size and the probable lack of a suitable contractor in small municipalities, coupled with the administrative costs associated with Batch Rehabilitation, that CMHC not deliver Batch Rehabilitation directly.

There is a probability that the municipality may wish to contract for the services of a delivery agent. While the details of such a proposal haven't been worked out, it might be feasible for the municipality to hire an architect, building inspector, general contractor or a similarly qualified person or firm to perform the functions of a delivery agent for the municipality.

## 26. ADVANCING

The advancing system currently used for RRAP may be used for Batch Rehabilitation with some modifications. The normal procedure is that advances would be payable to the homeowner who would then be responsible for paying the contractor.

Accountable advances are not applicable to Batch Rehabilitation projects, since contractors will perform all work for participating homeowners.

## 27. LIEN HOLDBACK

The Lien Act requires that homeowners retain 10 percent of each payment to the contractor for 45 days to cover potential liens placed against the property. The Act is such that any labourer, sub-contractor or supplier could place a lien against a property and, in the case of a supplier involved in a Batch Rehabilitation project, against all properties involved in the project.

The delivery agent must certify when the repairs on each unit are substantially complete; this certification begins the 45 day waiting period. During this time, anyone who has a claim may register a lien against the property. At the end of the 45 days, the contractor must provide a Statutory Declaration stating that there are no liens registered against the property; the contractor is then entitled to the holdback.

CMHC does not retain lien holdbacks on loan progress advances, although the applicant may wish to make his/her own holdbacks. It is our understanding that holdbacks are not normally retained by homeowners participating in RRAP. Because of the multiple homeowner nature of Batch Rehabilitation projects, it is our recommendation that both CMHC and the delivery agent strongly encourage homeowners to retain lien holdbacks.

## PART V PROCESSING OF RRAP APPLICANTS

### 1. INTRODUCTION

Batch Rehabilitation is a component of RRAP and as such, it closely follows the existing RRAP procedures for processing applications. From the homeowner's perspective, Batch Rehabilitation procedures are virtually identical to those of RRAP. The differences between Batch Rehabilitation and RRAP mainly affect the delivery agent and the contractor. These differences are primarily of an administrative nature; the most apparent differences occur at the outset of a Batch Rehabilitation project.

The following procedures assume that Batch Rehabilitation occurs in a RRAP designated area and that the steps involved

in designating the area have previously been completed by the delivery agent. Included in these preliminary procedures is the area survey of the area designated for RRAP.

## 2. STEP ONE/PRELIMINARY APPLICATION

Through promotional and educational materials within an area chosen for a Batch Rehabilitation project, the delivery agent will solicit homeowner participation in a Batch Rehabilitation project. Since the nature of a batch project centres on a number of homeowners participating in a single project, the delivery agent should encourage homeowners to apply for the project as soon as possible, the goal being to obtain a sufficient number of applicants to proceed with a Batch Rehabilitation project.

At the outset, the delivery agent should carefully explain the nature of the Batch Rehabilitation project, the differences between Batch Rehabilitation and RRAP, and the joint responsibilities of the homeowner, the delivery agent and the contractor.

## 3. STEP TWO/INITIAL INSPECTION

The initial inspection undertaken in preparation for a Batch Rehabilitation project is identical to the initial RRAP inspection with the following exception. At the time of the initial Batch Rehabilitation inspection, the delivery agent shall make arrangements with the homeowner concerning access to their home by the contractors bidding on the project.

## 4. STEP THREE/DESCRIPTION OF WORK AND COST ESTIMATES

The procedures involved in preparing a description of the work and cost estimates do not vary significantly between Batch Rehabilitation and normal RRAP. As in the RRAP process, the delivery agent completes inspections on each individual unit and prepares cost estimates. Estimates for each unit are prepared on CMHC 2553 forms.

## 5. SPECIAL BATCH REHABILITATION PROCEDURES: THE SELECTION OF A CONTRACTOR

One of the major differences between Batch Rehabilitation and RRAP lies in the selection of a contractor to carry out the rehabilitation work. Unlike RRAP where the homeowner selects a contractor, Batch Rehabilitation requires that the delivery agent accept the primary responsibility for selecting a contractor. This section indicates the procedures which the delivery agent must follow in selecting a contractor.

### 5.1 EXPRESSION OF INTEREST

When selecting a contractor for a Batch Rehabilitation scheme, the delivery agent must first obtain a reasonable cross-section of contracting companies interested in participating in a Batch Rehabilitation project. Given that a number of contractors and homeowners will be involved at this initial stage and in order to avoid, as much as possible, the element of "preferential treatment" or "favouritism", an advertisement concerning the Batch Rehabilitation project should be placed in either a local or a provincial newspaper, or both, to obtain a response from interested contractors.

The advertisement should provide sufficient information about the location and the number of units in the Batch Rehabilitation project to allow the contractor to judge the merit of responding. However, the location of the individual units in the project should not be provided. The advertisement should not be simply a statement of fact but should be presented in a form to solicit as much response from potential contractors as possible.

The information provided in the advertisement should include:

- a statement of intent of the Batch Rehabilitation Program;
- the name of the delivery agent;
- the location of project;
- the number of units;
- the maximum distance between units; and,
- the funding source;

The contractor would be required to provide the following information to the delivery agent:

- suitable references;
- size of the contractor's labour force;
- winter/summer variation in labour force size;
- age of Company;
- experience with residential construction; and,
- experience with RRAP

## 5.2 SELECTION OF CONTRACTOR

The delivery agent would be charged with establishing a preliminary list of contractors from the responses. This list would be developed mainly from the responses to the advertisement, but would also be partly based on the delivery agent's assessment of the capability of the firms. In most instances, the delivery agent would be familiar with the

respondents and be aware of their capabilities. Since the delivery agent would also know the estimated budget for the project, those contractors who may be located too far from the project to make it profitable for them to bid would be eliminated from the list. A selection committee would not be practical due to difficulties in obtaining qualified personnel who also have an interest in the project. A selection committee made up of homeowners is administratively and "politically" impractical.

Homeowners will be requested to provide input to the choice of contractor. In order not to overburden the selection process, a simple procedure has been devised. Each homeowner will be presented with the preliminary list of possibly six contractors and asked if they object to any of the contractors working on their property. They will also be asked if there is a particular contractor they wish to include on the list. Based on the homeowners comments, the delivery agent will add or delete names from the list. In some instances, it may be necessary to negotiate with homeowners concerning the inclusion/exclusion of contractors.

Using all the information available, the delivery agent and/or Inspector will then select three contractors and invite these to prepare detailed bids on the project. "Three" contractors are considered an optimal choice, given that contractors and their sub-contractors will be permitted to inspect each house in the project during the bid preparation stage.

It should be noted that at the outset, homeowners are informed by the delivery agent that only three contractors from the list will be asked to bid on the project to avoid excessive numbers of tradesmen visiting each home.

## 5.3 CONTRACTOR PROPOSAL PACKAGE

The detailed proposal package presented to the three contractors would contain the following information:

- the bid form;
- the civic location of each unit;
- the type of repairs required. Copies of the CMHC 2553 forms prepared by the delivery agent should be sufficient;
- a statement outlining the guidelines of the program;
- a statement that any contract is between the contractor and the owner and that payments are made by the owner of each unit;
- a statement that progress payments will be authorized by the delivery agent/Inspector based on work completed on each unit; and
- the date and time of bid closing.

Fire and liability insurance is mandatory for the contractor. Liability would normally be a minimum of $500,000 and fire insurance must cover the value of the property.

Each of the three contractors will prepare estimates of the cost of repairs using the Bid Form (see Appendix B). The contractor is required to provide both a total cost estimate for all the units in the project as well as separate estimates for each unit.

## 5.4 REVIEW BID PACKAGE AND AWARD CONTRACT

The Batch Rehabilitation procedures require that the delivery agent chose from amongst potential bidders three contractors who will be given the opportunity to bid on a project. These contractors must be given the opportunity to inspect each participating home to assess the types and costs of repairs.

Since a screening process takes place prior to the three contractors being invited to bid on the project, and since the bidding is on the basis of invitation, the basis of award should normally be on the low price. Should the bids be extremely close, completion time might become a factor. All contractors have a right to know the value of the other bids and the delivery agent must use extreme caution if it is decided to not accept the lowest bid.

### 5.5 OTHER PROCEDURES

Once the contractor has been chosen and the contract signed between individual homeowners and the contractor, Batch Rehabilitation generally follows the usual RRAP procedures.

## PART VIII - DELIVERY ARRANGEMENTS

### 2. STAFFING

The concentrated time frames under which Batch Rehabilitation projects occur necessitate a more intense period of work related to project administration and inspections. Consequently, the number of tasks associated with a Batch Rehabilitation project, in combination with the timing of the project require both a project administrator and an inspector. In smaller municipalities where the delivery agent consists of a single person, some difficulties delivering Batch Rehabilitation may be anticipated; staff increases may be required. On the other hand, the nature of Batch Rehabilitation requires that a number of units participate in a project; this criteria potentially restricts Batch Rehabilitation to larger urban centres where the delivery agent includes both an administrator and inspector.

Some municipalities may wish to consider contracting for the services of a delivery agent. An architect, building inspector, general contractor or a similarly qualified person or firm should be able to perform the functions of a delivery agent, provided that the necessary training requirements for the role of delivery agent are met.

## 3. ADVICE OF START-UP, PUBLICITY AND GUIDANCE MATERIAL

The Urban RRAP Handbook identifies a number of approaches to publicize RRAP in an area. The goal of these activities is to increase participation by homeowners in RRAP. We have carefully reviewed the need for promotion and public education in terms of Batch Rehabilitation and concluded that a similar need for promotion and education exists for batch projects. Similar approaches to RRAP promotion should be used for Batch Rehabilitation. These include advertisements in the media, the preparation of pamphlets, contacts with service clubs and religious groups in an area, neighbourhood block meetings and the establishment of a neighbourhood site office.

Of these activities, only the preparation of a pamphlet promoting Batch Rehabilitation requires some work by CMHC; the other activities are common to any RRAP project. The pamphlet should be well designed and self explanatory. If possible, the delivery agent should consider the possibility of including the homeowner's name and address on the information package rather than sending the information package to the "Occupant".

Since Batch Rehabilitation relies on a number of homeowners participating in a project at once, promotional and

educational activities do require special attention by the delivery agent in order to ensure that a sufficient numbers of homeowners participate in the project. Personal contact by the delivery agent is an important means of encouraging participation.

## PART IX - RRAP FORMS

With the exception of the Bid Form included in Appendix B of this report, Batch Rehabilitation projects require neither additional RRAP forms or modifications to the existing RRAP forms.

# APPENDIX B
# STANDARD BID FORM

Having examined all documents relating to work required at:

CIVIC _____
CIVIC _____
CIVIC _____
etc.

We offer to furnish all materials, plant and labour necessary for the proper execution and completion of the work including all government sales, hospital and other taxes, obtain and pay for all municipal permits for the lump sum of: $ ;
_____ Dollars.

The lump sum consists of;

CIVIC _____ $_____
CIVIC _____ $_____
etc.

It shall be understood that we have determined the quantity and quality of the materials required; investigated each location and are fully aware of the work required.

If we are accepted to perform this work, we shall complete the entire project within _____ weeks from date of award.

We are also aware that any contractual obligations are between the contractor and each homeowner.

Signature _____
Company _____
Address _____
_____
Date _____

# APPENDIX C

## SUMMARY OF FINDINGS
## HOUSING STOCK IN NEED OF MAJOR REPAIRS
## CMHC NATIONAL OFFICE REPORT

# HOUSING STOCK IN NEED OF MAJOR REPAIR:

# IDENTIFICATION OF URBAN AND INTRA-URBAN

# CONCENTRATIONS IN ATLANTIC CANADA

## - 1981 -

## VOLUME ONE

Paper prepared at the request of the
Atlantic Regional Office

John Engeland
Research Division
National Office
Canada Mortgage and Housing Corporation

May 1984

ATLANTIC REGIONAL SYNTHESIS:

Highlights of the major repairs problem in the Atlantic urban housing stock are presented in this section.

- First, as Chart One showed, half of the Atlantic housing stock was located in areas defined in this report as urban in 1981. Almost forty per cent or 24,000 of the dwellings found by the 1981 Census to be in need of major repair in the Atlantic were located in these urban areas. These are the dwellings for which the locational and tenure characteristics are summarized below.

- Of over 24 000 dwelling units which need major repair in Atlantic urban communities, over 10 000 or 43 per cent are rental. Almost 14 000 or 57 per cent are owned. Any decision to implement batch rehabilitation as a program tool to rehabilitate urban Atlantic housing would have to take into account this tenure distribution in the dwelling units requiring rehabilitation.

- The tenure of dwelling units requiring major repairs varies considerably from community to community. In the largest communities, a significant proportion of the major repairs problem is in the rental stock.

| COMMUNITY SIZE GROUP (Urban Atlantic) | OWNER/RENTER SPLIT OF DWELLING UNITS IN NEED OF MAJOR REPAIR |
|---|---|
| . 15 Largest Urban Communities | 50/50 |
| . Other Urban Communities 4 000 | 69/31 |
| . Remaining Urban Communities 4 000 | 72/27 |

TABLE 1

PROPORTION OF THE DWELLING STOCK IN NEED OF MAJOR REPAIRS WHICH IS OF OWNERSHIP TENURE - LARGEST ATLANTIC CITIES

| City | Level of Mapping | Units in Need | | | Ranked by # Of Units In Need By Size Group | | Ranked by # Of Units In Need All Atlantic | |
|---|---|---|---|---|---|---|---|---|
| | | Owned | All | % Owned | Owned | All | Owned | All |
| St. John's | C.T. | 545 | 1 070 | 51 | 4 | 5 | 7 | 6 |
| Halifax | C.T. | 870 | 2 725 | 32 | 2 | 1 | 2 | 1 |
| Dartmouth | C.T. | 360 | 1 280 | 28 | 5 | 3 | 8 | 3 |
| Saint John | C.T. | 900 | 2 160 | 42 | 1 | 2 | 1 | 2 |
| Moncton | C.T. | 580 | 1 120 | 52 | 3 | 4 | 6 | 4 |
| Corner Brook | E.A. | 350 | 495 | 71 | 4 | 4 | 9 | 9 |
| Charlottetown | E.A. | 195 | 465 | 42 | 8 | 5 | 13 | 10 |
| Amherst | E.A. | 325 | 450 | 72 | 5 | 6 | 10 | 11 |
| New Glasgow | E.A. | 285 | 445 | 64 | 6 | 7 | 11 | 12 |
| Glace Bay | E.A. | 760 | 865 | 88 | 1 | 3 | 3 | 8 |
| Sydney | E.A. | 630 | 870 | 72 | 2 | 2 | 4 | 7 |
| Fredericton | E.A. | 620 | 1 085 | 57 | 3 | 1 | 5 | 5 |
| Bathurst | E.A. | 230 | 405 | 57 | 7 | 8 | 12 | 13 |
| Edmundston | Unmapped | 125 | 230 | 54 | 2 | 2 | 15 | 15 |
| Campbellton | Unmapped | 135 | 245 | 55 | 1 | 1 | 14 | 14 |

TABLE 2

## PERCENT OF TOTAL UNITS IN NEED BY CITY

| City | Rank | Per Cent in Need |
|---|---|---|
| Glace Bay | 1 | 13.82 |
| Amherst | 2 | 13.12 |
| New Glasgow | 3 | 12.46 |
| Sydney | 4 | 9.30 |
| Bathurst | 5 | 8.49 |
| Charlottetown | 6 | 8.02 |
| Saint John | 7 | 7.91 |
| Campbellton | 8 | 7.87 |
| Corner Brook | 9 | 7.36 |
| ATLANTIC AVERAGE | | 7.2 |
| Fredericton | 10 | 6.91 |
| Halifax | 11 | 6.23 |
| Dartmouth | 12 | 6.05 |
| Moncton | 13 | 5.81 |
| Edmundston | 14 | 5.62 |
| St. John's | 15 | 4.37 |

1. Largest Urban Communities:

For each of the 15 largest communities, Table One on page 58 shows the proportion of the dwelling stock in need of major repair which is of ownership tenure. Communities are also ranked to identify those with the most dwelling units of any tenure in need of major repair, along with those with the most ownership dwelling units in need of major repair.

Table Two ranks the communities on a relative scale, by the severity of housing repair problems in their stock. Among these communities, Glace Bay has the worst relative housing problem (Table Two) and has the third largest number of ownership units with major repair problems in the Atlantic. This is despite the fact that ten other Atlantic communities have larger populations than Glace Bay. Glace Bay, however, is only the worst of the group of four Nova Scotian communities which top the list in Table Two. These four communities contain between them 2 000 ownership dwelling units in need of major repair. The major repair data result in high priority status for rehabilitation for these communities, giving them high status as sites for potential batch rehabilitation.

As noted above, in the largest communities a majority of the major repairs problems are in the rental stock. Over 70 per cent of all dwelling units in need of major repair in Dartmouth are rental; in Halifax, just under 70 per cent are rental. In Saint John, almost 60 per cent of dwelling units in need of major repair are rental. About half of the units in need of major repair in St. John's and Moncton are rental.

One of the largest intra-urban concentrations of rental units in need of major repair in the Atlantic in 1981 was in E.A. 169 in C.T. 106 in Dartmouth where 110 units (40 per cent) of the rental stock were in need.

In Saint John, New Brunswick, however, while the number of units recorded as in need of major repair in E.A. 167 of C.T. 22 in 1981 was slightly less at 100, they constituted almost 60 per cent of the stock of 170 units. Other high concentrations of the rental repair problem occur in E.A.'s in: C.T. 6 of St. John's; C.T. 10 of Halifax; and C.T.'s 110 and 111 of Dartmouth.

2. Other Urban Centres Over 4 000 Population:

Amongst communities in the next size group down, Wabana stands out. Wabana is the Newfoundland community with the highest proportion of its stock in need of major repair, where 150 ownership units need rehabilitation. However, several Nova Scotian communities fall into this group. While Pictou is the worst off of these, as already noted, the Cape Breton area in Nova Scotia is the location of a particularly severe concentration of communities with high repair need. Chatham, New Brunswick has similar housing stock repair problems.

3. Conclusions:

The dependency of the economies of scale of batch rehabilitation on the similarity of housing to be repaired, repairs to be executed and spatial proximity of units to be repaired was not clearly established in the Gardner Pinfold report. This study makes no attempt to establish these economic parameters. Dwelling units reported as needing major repair by their occupants on the Census dwelling condition question have been identified by tenure and location in this report. Once the economic parameters necessary for successful batch rehabilitation are determined, then the characteristics of the urban Atlantic housing stock documented in this report as needing major repair can be assessed for whether or not they lend themselves to successful batch rehabilitation.

Cases of concentrations of need for major repair have been found at various levels of areal aggregation in both the ownership and rental housing stock in Atlantic urban communities. It is necessary to take this into account in the design of a batch or any other rehabilitation program. Based on consideration of both the absolute number of units requiring repair and the relative severity of the problem, the worst concentrations in each tenure group at different levels of areal analysis in the Atlantic are:

- for rental repair need at the intra-urban level, in E.A. 167 of C.T. 22 of Saint John, New Brunswick.

- for ownership repair need at the overall community level, in the four Nova Scotian communities of Glace Bay, Amherst, New Glasgow, and Sydney.

- for ownership repair need at the regional level, in the Sydney-Glace Bay Cape Breton area, Nova Scotia.